MixWizard
series

WZ12:2DX

WZ16:2DX

WZ14:4:2+



The MixWizards have been designed with the same commitment to professionalism and detail that has made Allen & Heath a leading name in larger format mixing consoles for nearly 30 years. Thousands of PA rental companies, touring and recording artists, systems contractors, houses of worship and clubs are already enjoying the benefits of the MixWizard Series. Now the series offers even more, with a host of added and upgraded features across the range, further establishing the MixWizards as the choice in high specification compact mixers. In the way they sound, the way they perform and in their construction, nothing compares with the MixWizard Series.

ALLEN & HEATH

the MixWizard *range*

WZ12:2DX

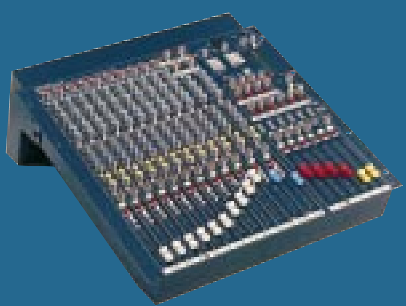


With 8 mono inputs and 2 fully featured dual stereos, this latest addition to the range provides all the professionalism of its sister consoles at a new lower price point. Like the WZ16:2 DX, the WZ12:2 DX comes complete with onboard digital effects.

WZ16:2DX



Building on the unprecedented success of the original WZ16:2, the new model has the same winning features for the broadest range of applications, plus a host of new assets, including onboard dual effects processor, channel on LEDs and more.



A truly versatile 4 group console with mode switching for front of house and/or monitoring applications, plus extensive recording capability. New and upgraded features include a switchable 1kHz oscillator/pink noise generator and individual phantom power switching.

When we held the first design meetings for the MixWizard series, we had a very clear goal in mind - to create a range of compact mixers with **big features**, **great sound** and **totally professional build quality**. The phenomenal sales that the MixWizards have enjoyed tell me that we got it right.

Now the best has got even better. We've looked at the areas where we could improve on the existing MixWizard designs, adding useful features such as a **Pink noise generator** for the WZ14:4:2+ and **onboard FX** for the other models. We've listened to your requests for **metal jacks** and **channel on led's** - you'll now find these on all MixWizards. Internally, we've changed the way the circuit boards are connected to make servicing even easier, and we've created a new **universal input heat reducing power supply**.

There's even a completely new MixWizard, the WZ12:2DX, which offers the same commitment to quality and attention to detail that have made its sister consoles such a big hit, but at an even more **affordable price point**.

I hope that you get as much enjoyment from using the new improved MixWizards as we have had in designing them.

Carey Davies
R&D Manager
Allen & Heath

QCC

Allen & Heath's unique Quick Change Connector system allows reconfiguration of all MixWizards for desktop, rack or flightcase mounting. Unlike many similar systems, QCC is quick and convenient to use - your MixWizard can be changed from desktop to rackmount format and back, in just a couple of minutes.

MSP

Any signal processing will inevitably change the original sound - even sending a signal down a wire will have a minute influence. The crystal-clear MixWizard sound is achieved by Allen & Heath's MSP (Minimum Signal Path) electronic design, wide-band flat response amplifiers, top-grade low noise components and solid grounding. Your ears will know the difference.

Build Quality

The MixWizards feel professional because they are professional - and they are built to last. All rotary controls are securely bolted to the front panel - so the rugged all-metal chassis takes the weight of any impact. Each input and master output has its own vertically mounted circuit board for rigidity and ease of service or modification.

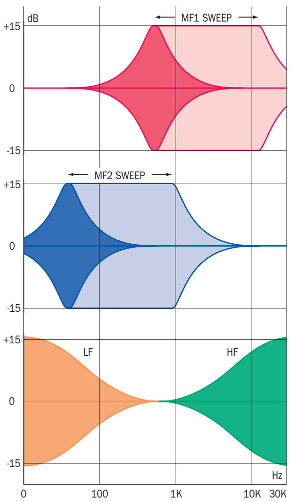
- *4 band EQ with 2 sweepable mids*
- *100Hz low-cut filters*
- *Balanced mic/line inputs*
- *6 auxes on individual pots*
- *100mm dust protected smooth travel faders*
- *QCC connectors for easy rack or desktop mounting*
- *MSP electronic design for exceptional audio clarity*
- *12 Segment bargraph metering*
- *70dB input ranges*
- *Direct outputs*
- *10U Rack size*
- *Channel ON switches and LEDs*
- *+48V switchable phantom power*
- *AFL/PFL monitoring*
- *Metal jack sockets*

WZ14:4:2+



10 Mic/Line Inputs

◆ High gain, low distortion preamps match all signals, from -60dBu.



distance miking to +10dBu high level electronic instruments.

◆ Individually selected +48V. Phantom Power on all mic/line inputs.

◆ Jack inserts on each input provide easy access for gates, compressors etc.

◆ 100Hz low-cut filters.

◆ Exceptional 4 band EQ with 2 mid sweeps, with overlapping frequency for complete corrective and creative access to all frequencies. EQ bypass switches enable easy in/out comparisons and eliminate noise on untreated signals.

◆ Peak and PFL warning LED.

◆ 6 aux sends on individual controls. Auxes 1-4 and 5-6 can be set pre or post fade for monitor feeds or fx processing. Aux levels provide up to 6dB boost when needed. Sends are taken post EQ, post on switch, though internal links can enable changes to the default settings if required.

◆ Channel ON switch with LED.

◆ Pan controls with centre detent allow panning across groups and LR

◆ 100mm smooth throw faders for precision control and up to +10dB extra boost.

◆ Direct outs are provided post-fade for multitrack recording and special feeds.

2 Stereo Inputs

◆ Independent A and B sources on phono and 1/4" jack connectors respectively.

◆ 4 band EQ.

◆ Routing to all 6 auxes, with internal links allowing selected auxes to be configured as stereos.

◆ Outputs to busses, with the stereo image positioned via a balance control.

◆ Peak and PFL led and switch.

4 Stereo Returns

◆ Total of 8 possible fx returns (excluding the 2-track return) on paired 1/4" jacks.

◆ Returns can be fed to corresponding auxes (return 1 summed to aux 1, return 2 to aux 2 etc.). Each return can also be fed to the LR.

◆ PFL switch and warning led.

Dual Functionality

WZ14:4:2+ excels as a F-o-H console, as a Monitor mixer, or as a combination of the two.

In F-o-H mode the 4 groups and LR feed auditorium speaker arrays, delay systems, dressing rooms, foyers etc, whilst the aux sends provide local monitors and fx.

WZ14:4:2+ becomes a dedicated monitor console by activating tamperproof mode switches. The aux and group/LR feeds are swapped over, giving XLR outs, inserts for graphic EQ's and 100mm fader controls to all 6 aux mixes.

In Dual Mode, as many auxes and groups are swapped over as required, allowing all mixing functions to be provided by a single engineer and a single console.

Engineer's Monitoring

LR output is monitored via 12 segment peak reading bargraph meters, and by the headphone socket (complete with independent level control). PFL/AFL selections override the LR feed, illuminating a warning LED.

Groups and LR are also monitored by a bank of six additional 4 segment level meters, allowing output level monitoring even when PFL/AFL is selected.

In monitor mode, the 4 segment meters monitor auxes 1-6, whilst the main 12 segment bargraph follows auxes 5 and 6.

2-Track Send and Return

Separate phono connectors and level trims are provided for 2-track recording from the LR mix. Selecting the LR replay button routes this signal to the LR mix for intermission replay.

Mono Output

The LR mono sum is fed to a balanced XLR output with level control for broadcast feeds, F-o-H fills etc.

In monitor mode, the mono out can be used to feed an engineer's wedge with any AFL/PFL signals.

Output Masters

Groups can be panned to the LR as well as having their own outputs. Signals are sent to the balanced XLR outputs via the faders, on and AFL switches. All XLR outputs have inserts and peak reading meters.

In monitor mode, signals are sent to the balanced jack aux send outputs, via their level controls and AFL, whilst benefiting from all master output features.

Talkback to Auxes

A talkback mic can be connected via a front panel XLR socket, allowing talkback to auxes in selected pairs.

Oscillator & Pink Noise Generator

A 1kHz signal can be routed through level controls and meters to 2-track recorders for level alignments. A pink noise generator allows checking of frequency response and phase connections for speaker arrays.

Apart from the headphone and talkback plugs on the front panel, all connections are made to the QCC panel which can be swung and fixed for rear or back orientation.

Inputs	**Connector**				**Impedance**	**Level**
Mono 1-10	XLR	pin2 hot, 3 cold	balanced }	pad out	2k ohm	-60 to -20dBu
	TRS jack	tip hot, ring cold	balanced }	pad in	>10k ohm	-30 to +10dBu
Stereo ch 11-14	TRS jack	tip hot (L for Mono)	unbalanced		>10k ohm	-20 to +10dBu
	RCA phono		unbalanced		>10k ohm	-20 to +10dBu
Stereo returns 1-4	TRS jack	tip hot, ring grnd	unbalanced		>10k ohm	-10dBu minimum
2-track return	RCA phono		unbalanced		>10k ohm	-10dBu minimum
Talkback mic	XLR	pin2 hot, 3 grnd	unbalanced		2k ohm	-40 to -15dBu
Inserts						
Channel 1-10	TRS jack	tip send, ring return	unbalanced		<75 ohm, >3k ohm	0dBu
L-R mix/Groups	TRS jack	tip send, ring return	unbalanced		<75 ohm, >7k ohm	-2dBu
Outputs						
Direct, ch 1-10	TRS jack	tip hot, ring cold	impedance balanced		<75 ohm	-0dBu
Aux 1-6	TRS jack	tip hot, ring cold	balanced		<75 ohm	+4dBu
2-track send	RCA phono		unbalanced		<75 ohm	-10 dBV minimum
L,R,M,Groups	XLR	pin2 hot, 3 cold	balanced		<75 ohm	+4dBu
Headphones	TRS Jack	tip L, ring R, on front panel	30 to 600 ohm headphones recommended			
Mains power inlet	Standard IEC	3 pin L,N,E. IEC to moulded plug (country-dependent), internally wired for required worldwide voltage.				


MixWizard DUAL FUNCTION 4 GROUP MIXER
WZ14:4:2+
ST 1
ST 2
ST 3
ST 4
1
2
3
4
5
6
7
8
9
10
11-12
13-14
1
2
3
4
L
R


MixWizard WZ14:4:2+
WARNING - THIS APPARATUS MUST BE EARTHED.
CAUTION



MixWizard 16 MIC/LINE INPUT MIXER
ST2
ST1
AUX1
AUX2
AUX3
AUX4
AUX5
AUX6
ST1
ST2
A-B
ALLEN & HEATH
WZ16:2DX
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
L
R



MIC/LINE INPUTS
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
ST2
ST1
WARNING - THIS APPARATUS MUST BE EARTHED
CAUTION
ALLEN & HEATH
MixWizard WZ16:2DX

16 Mic/Line Inputs

◆ XLR and TRS Jack balanced inputs on all channels, with switchable 30dB pad.
◆ +48V Phantom Power globally selected. Individual channels can be disabled via internal links.
◆ Low noise, low distortion preamps handling input levels from -60dBu to +10dBu.
◆ Jack insert points for compressors, gates etc.
◆ 100Hz low-cut filters for eliminating unwanted noise.
◆ 4 band EQ with 2 parametric mids for precise colouring and correction. All bands offer up to 15dB cut or boost, plus centre detents for EQ lockout.
◆ 6 aux sends on individual controls, giving up to +6dB boost. Auxes 1-2 are set pre fader for cues and monitors, 3-4 are switchable pre/post and 5-6 are post fader for FX. Aux sends are taken post EQ and post ON switch, although these configurations can be reversed using internal links.
◆ Constant power Pan controls give smooth balancing across the L-R buss.
◆ Channel on switches are marked by a warning led for instant recognition.
◆ Peak levels and PFL are indicated by a large red led.
◆ 100mm travel, long-life faders give maximum control and up to +10dB of boost.
◆ Direct outs on impedance balanced TRS jacks facilitate hands-free multitrack recording.

2 Stereo Returns

◆ Separate balanced L+R jacks on each channel pair.
◆ ST1 has feeds to both aux 1 and aux 2.
◆ ST1 has ON switching for easy FX muting.

Masters + Monitors

L-R

The main L-R outputs are on separate full 100mm faders. For graphic EQ's and other signal processing, global insert jacks are provided for signal takeout/injection on the master L-R buss.

Aux Master Sends

Each of the 6 aux mixes has its own master level control. Up to 4dB boost is available to the impedance balanced output jacks.

Mono and Stereo Aux Monitoring

WZ16:2DX and WZ12.2DX's unique monitoring system allows headphone monitoring of a single aux or to a pair of auxes in stereo for stereo monitors and recording feeds.

Bargraph Meters

Twin 3 colour, 12 segment bargraph meters follow the selected monitor source.

PFL

A red LED lights when PFL is selected, as PFL overrides all other monitor sources.

Headphones

Monitor source signals are fed to the stereo headphone jack via an independent phones level control.

Monitor Select Switchbank

A column of switches gives quick selection of monitor and meter sources. Fed post-master level, the aux signals can be selected individually for mono listening or in pairs for stereo and balance checks. Stereo returns are selected in stereo pairs.

AB Out

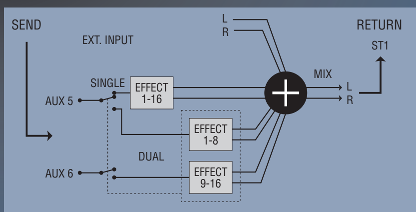
WZ16:2DX and WZ12.2DX features an innovative independent stereo or monoed output. The AB out can be fed from the L-R mix pre or post fader, or from the selected monitor source. As it offers its own level control, this versatile output can be used to feed a 2-track recorder, broadcast line, speaker fill, studio monitors, engineer's wedge or employed for any number of other special applications.

effects

When you need effects, the WZ16:2DX and WZ12:DX offer a quantum leap of performance. The dedicated on-board digital effects processor can be configured as a single stereo effect or two independent stereo effects, allowing you to select from 32 (yes, thirty two!) effects. Combined with the two stereo effects returns channels, this gives you up to four stereo effects in your mix without tying up valuable channels as effects returns.

Allen & Heath has carefully selected the algorithms for the effects processor. In **Single** Mode, the processor is driven from Aux 5 with 16 different effects programs available. In **Dual** Mode, processing is provided on both Auxes 5 and 6, with 8 independent programs available on each. Whichever mode you choose, the effect returns to the mix via FX return channel ST1. External effects can also be mixed into this channel via the dedicated jack connectors. Auxes 5 and 6, can still be used as conventional aux sends to drive external processors or foldback amplifiers.

The MIDI IN socket on the rear panel provides program change capability via MIDI and also enables presets to be edited using an external computer.



Apart from the headphone jack on the front panel, all connections are made to the QCC panel which can be swung and fixed for rear or back orientation.

Inputs	**Connector**			**Impedance**	**Level**
Mono ch	XLR	pin2 hot	balanced		
		tip hot	balanced		
pad out				2k ohm	-60 to -20dBu
pad in				>10k ohm	-30 to +10dBu
Stereo ch ST1-2	TRS jack	tip hot	balanced	>10k ohm	-10dBV (+4dBu option)
Stereo ch 11-14 (12 only)	TRS jack	tip hot (L for Mono)	unbalanced	>10k ohm	-20 to +10dBu
	RCA phono		unbalanced	>10k ohm	-20 to +10dBu
Inserts					
Ch 1-16	TRS jack	tip send, ring return	unbalanced	<75 ohm, >10k ohm	0dBu
L-R	TRS jack	tip send, ring return	unbalanced	<75 ohm, >10k ohm	-2dBu
Outputs					
Direct, ch 1-16	TRS jack	tip hot	impedance balanced	<75 ohm	0dBu
Auxes 1-6	TRS jack	tip hot	impedance balanced	<75 ohm	-2dBu (+4dBu bal. option)
A-B	TRS jack	tip hot	impedance balanced	<75 ohm	-2dBu (+4dBu bal. option)
L-R	XLR	pin 2 hot	balanced	<75 ohm	+4dBu
Headphones	TRS jack	tip L, ring R		30 to 600 ohm headphones recommended	
Mains power inlet	Standard IEC	3 pin L,N,E.			

WZ12:2DX *unique features*



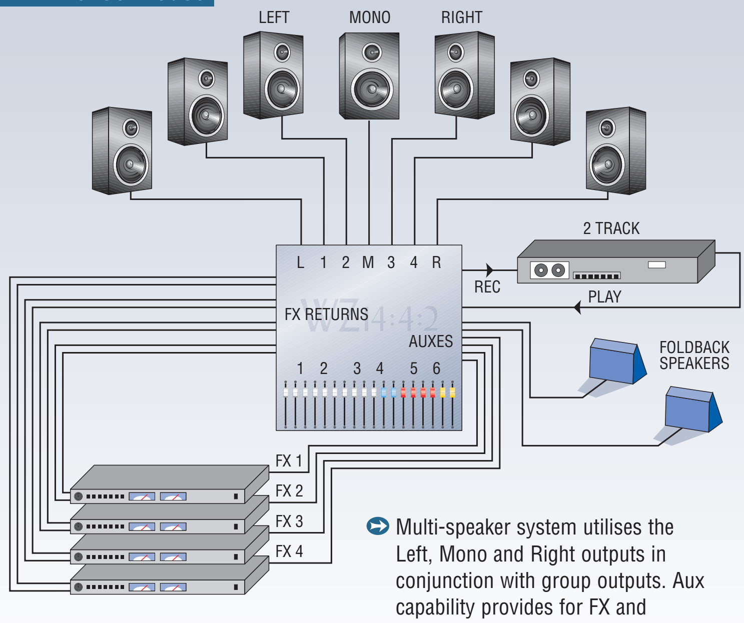
2 Dual Stereo Inputs

- Separate A and B sources on phono and 1/4" jack connectors.
- 4 band EQ.
- Routing to all auxes, plus internal links to configure selected auxes as stereos.
- Outputs to busses, with stereo image determined by a balance control.
- Peak and PFL led and switch.



WZ14:4:2+ *example applications*

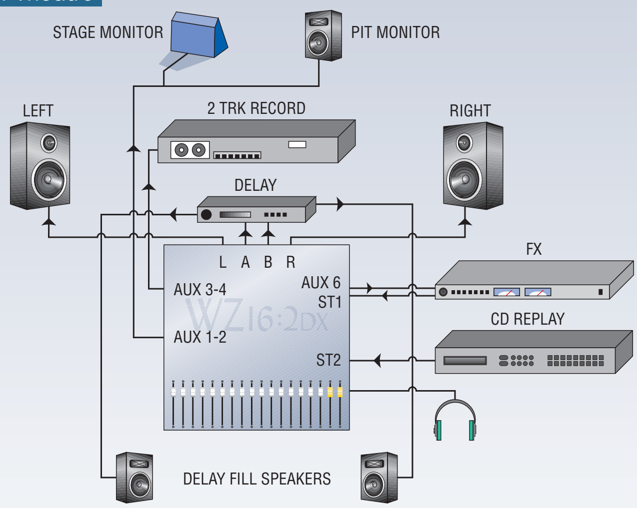
Front-of-House



Multi-speaker system utilises the Left, Mono and Right outputs in conjunction with group outputs. Aux capability provides for FX and foldback requirements.

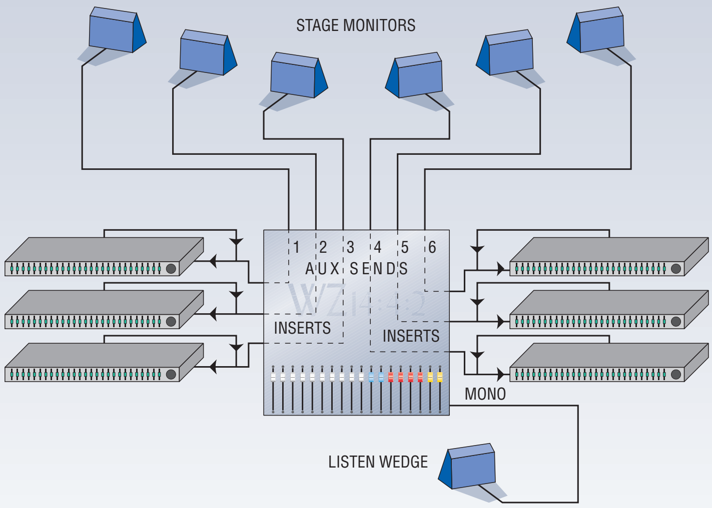
WZ16:2DX & WZ12:2DX *example applications*

Small Theatre



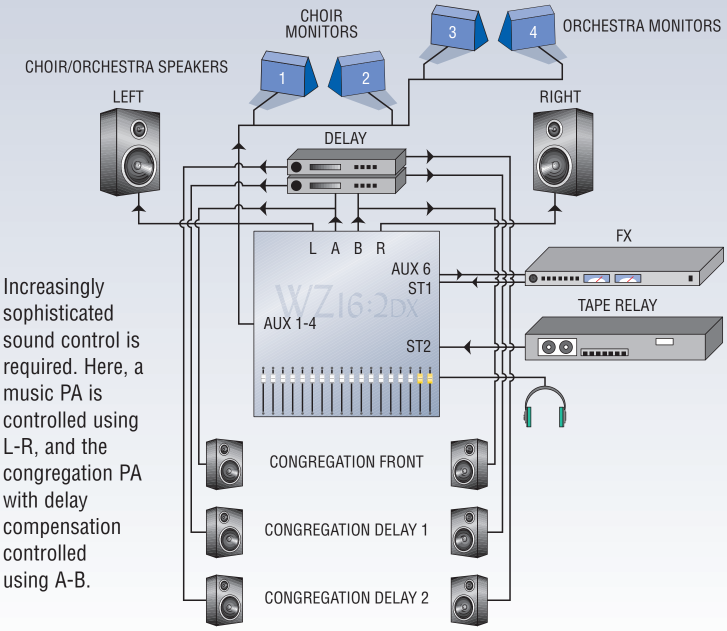
Typical amateur dramatics set-up with delay speakers compensating for acoustic delay and improving clarity to the rear of the hall. CD intermission replay, 2-track recording for the performers.

Stage Monitor



6 unique on-stage mixes are created. Insets allow graphic EQ's to control each mix. The engineer uses the mono output to check on-stage sound.

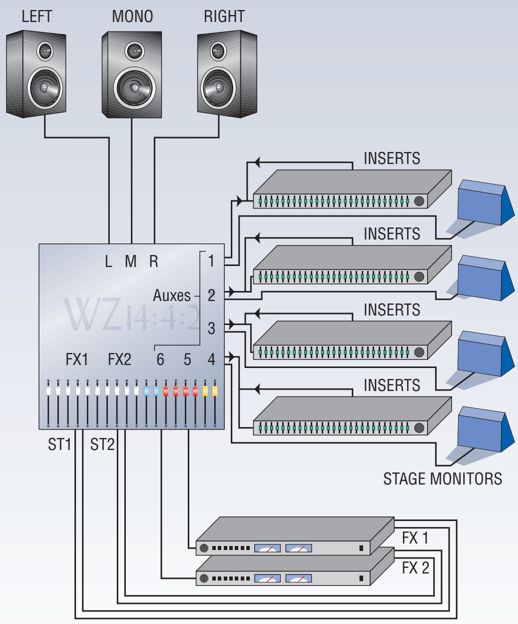
House of Worship



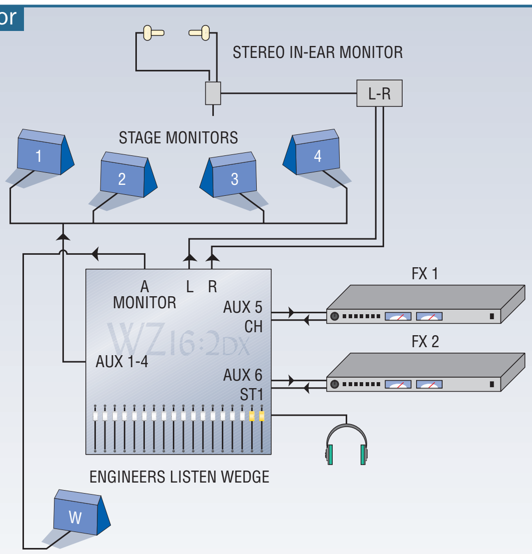
Increasingly sophisticated sound control is required. Here, a music PA is controlled using L-R, and the congregation PA with delay compensation controlled using A-B.

Dual Mode

Left, Mono, Right and Aux outputs are split between FoH, Monitor and FX duties. Monitors have inserts and long faders allowing professional monitor mixing from the FoH position.

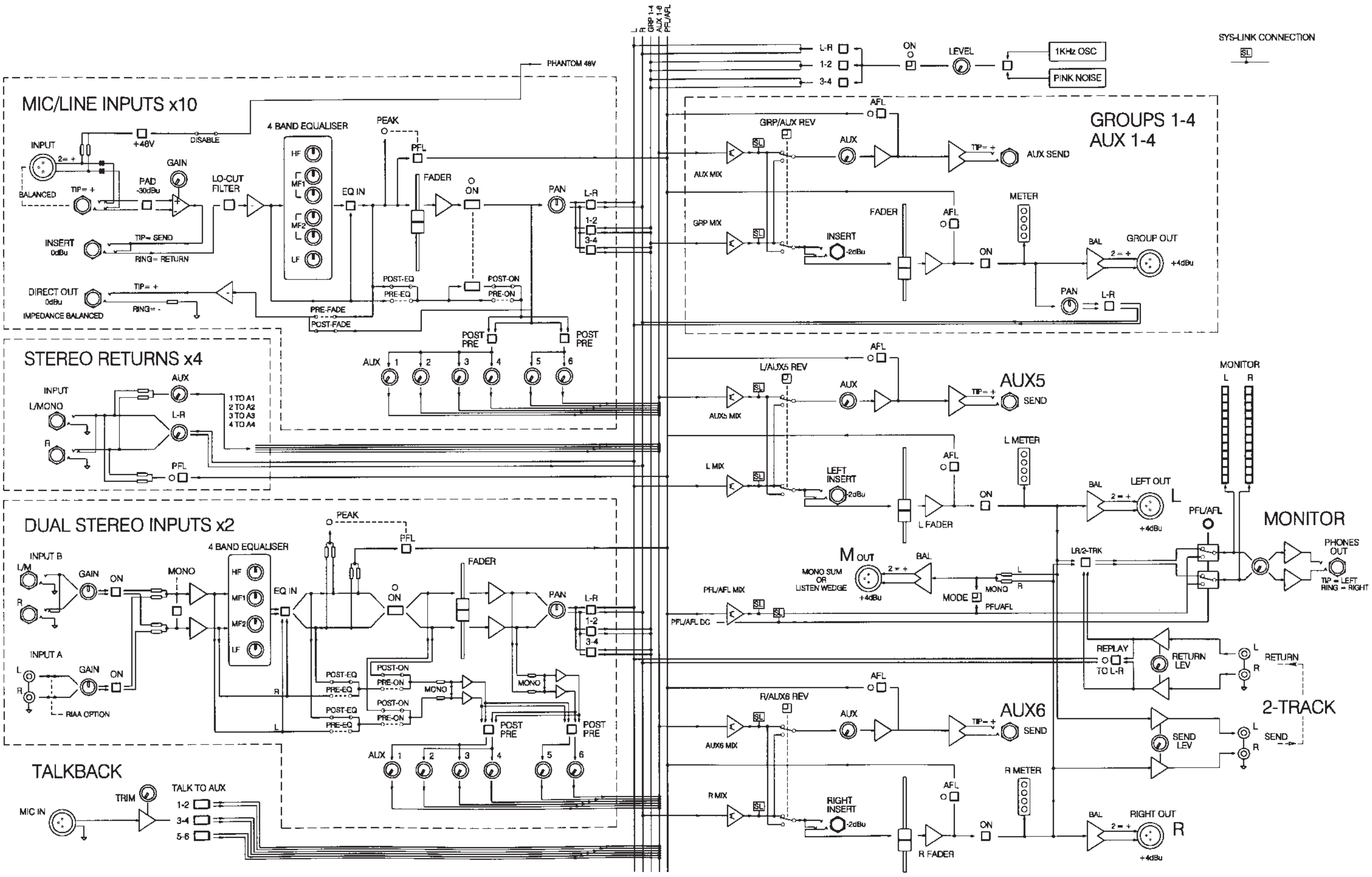


Stage Monitor

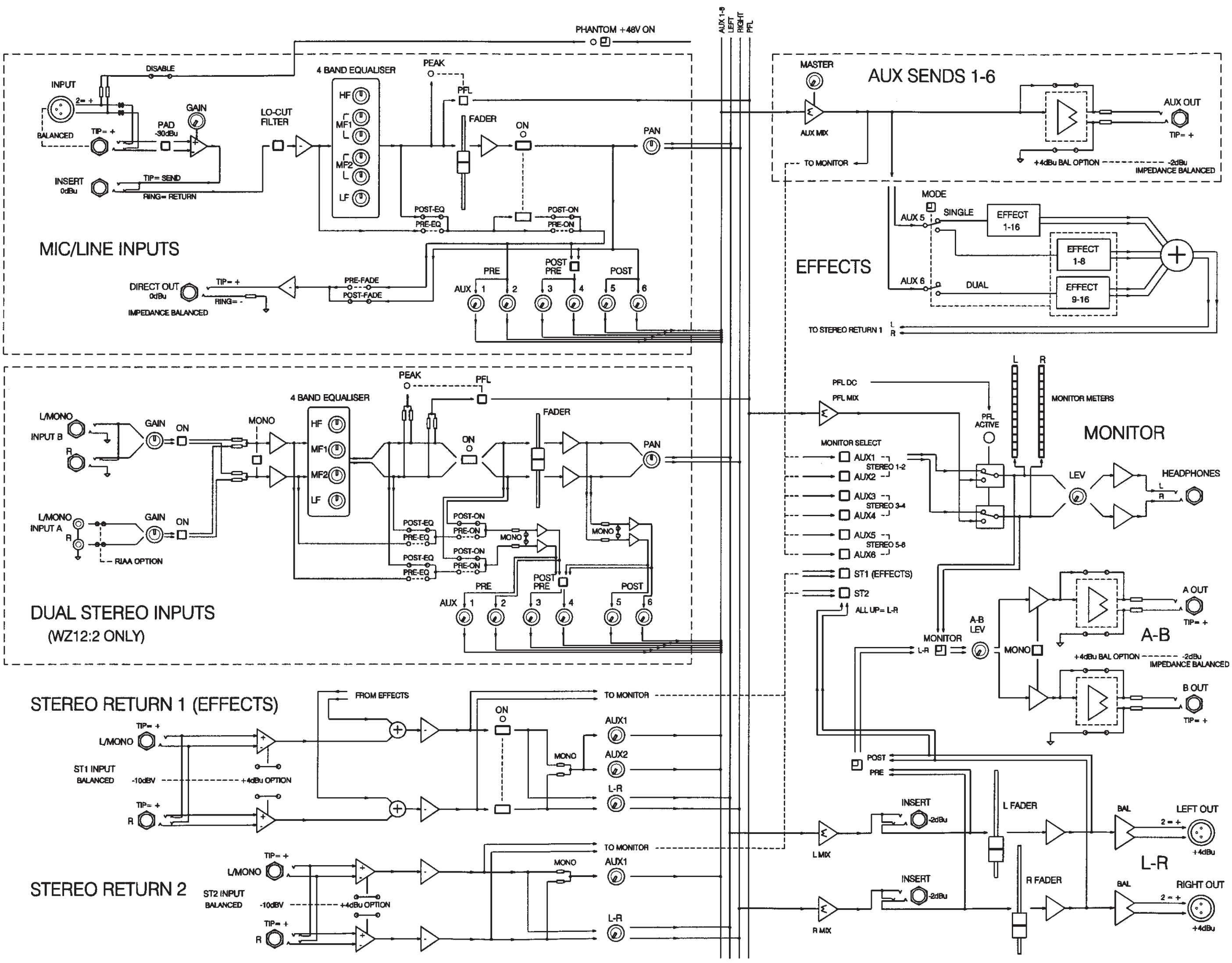


This example shows 4 floor wedges for the musicians and a stereo in-ear monitor for the lead performer. The engineer monitors the signals using a floor wedge similar to the stage monitors.

WZ14:4:2+ BLOCK DIAGRAM



WZ16:2DX & WZ12:2DX BLOCK DIAGRAM





WZ14:4:2+ SPECIFICATIONS

0dBu = 0.775 Volts rms	0dBV = 1 Volt rms
Maximum output level	
XLR and jack	+25dBu into 2k ohm load
Internal headroom	
Mix to output	+23dB
Channels	+21dB
Peak LEDs	Turn on 5dB before clipping

Meters
L,R: Peak reading 12 segment, 3 colour, led bars
Auxes/Groups+L,R (6 meters): 4 segment led

WZ14:4:4+ Options
Sys-Link™ Expander System : WZ1442+ - SL1
Dual Sys-Link™ Expander System : WZ1442+ - SL1
RIAA Equalisation : WZ1442 - RIAA

Frequency response	
20Hz to 50kHz	+0/-1dB
Total harmonic distortion	
THD+noise measured at +14dBu 1kHz	
Channel to mix output	< 0.006%
Crosstalk measured at 1kHz, ref driven channel	
Channel fader down	< -90dB
Channel off	< -90dB
Noise measured rms 22Hz to 22kHz	
Mic EIN referred to 150 ohm source	<-128dB
L-R residual output noise	<-97dBu (101dB S/N)
L-R faders unity mix noise	<-87dBu (-91dB S/N)

Mains power	Internal unit, linear regulated
AC mains input	100 to 240V AC @ 50/60Hz
	Switch mode power supply with autosensing
Power consumption	35W max
Mains fuse rating	
100-120V AC use	T630mA 20mm
220-240V AC use	T315mA 20mm

Mechanical specifications

Dimensions (mm)	Width	Height	Depth
Desk mounted	483mm	195mm	530mm
Rack mounted	483(19")	444(10U)	135
Packed	590	260	610
	Unpacked	Packed	
Weight	10kg	13kg	

WZ16:2DX & WZ12:2DX

0dBu = 0.775 Volts rms	0dBV = 1 Volt rms
Maximum output level	
L-R	+27dBu into 600 ohm max load
All other outputs	+21dBu into 2k ohm max load
Internal headroom	
Mix to output	+23dB
Channels	+21dB
Peak LEDs	Turns on 5dB before clipping

Meters
Peak reading 12 segment 3 colour led bargraph
0VU = +4dBu at L-R output

Frequency response	
20Hz to 50kHz	+0/-1dB
Total harmonic distortion	
measured at +14dBu 1kHz	
Channel to mix out	< 0.008%
Crosstalk measured at 1kHz	
Channel fader down	< -90dB
Channel off	< -90dB
Noise measured rms 22Hz to 22kHz	
Mic EIN referred to 150 ohm source	-128dB
L-R residual output noise	< -90dBu (-94dB S/N)
L-R faders unity mix noise	< -84dBu (-88dB S/N)

Mains power	Internal unit
AC mains input	100 to 240V AC @ 50/60Hz
	Switch mode power supply with autosensing
Power consumption	30W max
Mains fuse rating	
100-120V AC use	T315mA 20mm
220-240V AC use	T630mA 20mm

Mechanical specifications

Dimensions (mm)	Width	Height	Depth
Desk mounted	483mm	195mm	530mm
Rack mounted	483(19")	444(10U)	135
Packed	590	260	
	Unpacked	Packed	
Weight	10kg	13kg	

MixWizard Wooden Surround Option : WZ-DSR

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The WZ14:4:2+, WZ16:2DX & WZ12:2DX complies with the European Directives for Electromagnetic Compatibility 89/336/EEC & 92/31/EEC

1995

INVESTOR IN PEOPLE

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